

What is claimed is:

1 1. A method for automatically generating a test environment for testing a plurality of DUTs in a
2 test system, comprising the steps of:

3 mapping the plurality of DUTs into pins of the tester system to create pin data;
4 inputting into a test program generator pattern data, generic test program rules and the pin data;
5 generating a multi-DUT test program and multi-DUT pattern data; and
6 controlling the test system through the test program.

1 2. The method of claim 1 also comprising the step of generating functional fail data for each
2 DUT.

1 3. The method of claim 1 wherein the multi-DUT test program makes a plurality of DUTs appear
2 as a single DUT.

1 4. The method of claim 1 wherein test program generation occurs independently from tester
2 software.

1 5. The method of claim 1 wherein the mapping of the plurality of DUTs to the tester system pins
2 occurs independently of restrictions imposed by the test system.

1 6. The method of claim 5 also comprising the step of interfacing to a generic device interface
2 board based on channel assignments created in the mapping step.

1 7. An automated test system which generates test results for a plurality of DUTs using one
2 tester, which automated test system comprises.
3 a pin data storage area which contains pin data which maps the plurality of DUTs into pins of the

4 tester system;
5 a pattern data storage area,
6 a generic program rules storage area;
7 a test program generator which takes as input the pin data, pattern data and generic program
8 rules;
9 a multi-DUT test program which is generated by the test program;
10 a multi-DUT pattern data storage area generated by the the test program;
11 a tester containing a plurality of DUTs that has an input from the multi-DUT pattern data and is
12 controlled by the multi-DUT test program.

1 8. The automated test system of claim 7 which also comprises a storage area for receiving fail
2 data for each of the plurality of DUTs.

1 9. The automated test system of claim 7 where the multi-DUT pattern data is input into the tester
2 in either serial or parallel form.

1 10. The automated test system of claim 7 where the multi-DUT pattern data appears to the tester
2 as a pattern data from a single DUT.

1 11. The automated test system of claim 7 where pin data in the pin data storage area is mapped in
2 a manner that would violate tester pin restrictions.

1 12. The automated test system of claim 7 also comprise a generic device interface board that is
2 mapped to the tester according to the pin data.

1 13. A program storage device readable by automated test system, tangibly embodying a program
2 of instructions executable by the automated test system to perform method steps for automatically

3 generating a test environment for testing a plurality of DUTs in a tester, said method steps
4 comprising:
5 mapping the plurality of DUTs into pins of the tester system to create pin data;
6 inputting into a test program generator pattern data, generic test program rules and the pin data;
7 generating a multi-DUT test program and multi-DUT pattern data; and
8 controlling the tester through the test program.

1 14. The program storage device of claim 13 wherein the method also comprises the step of
2 generating functional fail data for each DUT.

1 15. The program storage device of claim 13 wherein the multi-DUT test program makes a
2 plurality of DUTs appear as a single DUT.

1 16. The program storage device of claim 13 wherein test program generation occurs
2 independently from tester software.

1 17. The program storage device of claim 13 wherein the mapping of the plurality of DUTs to
2 tester system pins occurs independently of restrictions imposed by the test system.

1 18. The program storage device of claim 13 wherein the multi-DUT test patterns are provided to
2 the tester in both serial and parallel form.

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A1
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B1